IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strikethrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

1. (Previously Presented) An apparatus for color compensation of an input signal comprising:

a chroma deflection generation unit to calculate a chroma deflection based on an input chroma signal detected from the input signal and a predetermined first reference value;

a hue deflection generation unit to calculate a hue deflection based on an input hue signal detected from the input signal and a predetermined second reference value;

a luminance deflection generation unit to calculate a luminance deflection based on an input luminance signal detected from the input signal and a predetermined third reference value; and

a skin tone mapping function generation unit to output a compensated chroma signal, a compensated hue signal and a compensated luminance signal after individually compensating the input chroma, hue, and luminance signals based on the chroma deflection, the hue deflection and the luminance deflection.

2. (Previously Presented) The apparatus for color compensation of claim 1, further comprising a color space conversion unit to respectively calculate the input chroma signal, the hue signal and the luminance signal by converting a color signal of the input signal in a color space, and transmit the chroma, hue, and luminance signals to the corresponding chroma deflection function generation unit, hue deflection function generation unit and luminance deflection function unit.

3. (Previously Presented) The apparatus for color compensation of claim 1, wherein the first, second, and third reference values are provided based on empirical data collected after statistically processing data obtained through experiment.

4. (Original) The apparatus for color compensation of claim 3, wherein the chroma deflection is calculated based on a difference between the input chroma signal and the first reference value.

5. (Previously Presented) The apparatus for color compensation of claim 4, wherein the skin tone mapping function unit outputs the compensated chroma signal compensated after summing the input chroma signal and the chroma deflection.

6. (Original) The apparatus for color compensation of claim 3, wherein the hue deflection is calculated based on a difference between the input hue signal and the second reference value.

7. (Previously Presented) The apparatus for color compensation of claim 6, wherein the skin tone mapping function unit outputs the compensated chroma signal compensated after summing the input hue signal and the hue deflection.

8. (Original) The apparatus for color compensation of claim 3, wherein the luminance deflection is calculated based on a difference between the input luminance signal and the third reference value.

9. (Original) The apparatus for color compensation of claim 8, wherein the skin tone mapping function unit outputs the compensated luminance signal compensated after summing the input luminance signal and the luminance deflection.

10. (Original) A method of color compensation of an input signal comprising:

calculating a chroma deflection based on an input chroma signal detected from the input signal and a predetermined first reference value;

calculating a hue deflection based on an input hue signal detected from the input signal and a predetermined second reference value;

calculating a luminance deflection based on an input luminance signal and a predetermined third reference value; and

outputting the compensated chroma, hue and luminance signals after individually compensating the input chroma, hue, and luminance signals based on the calculated chroma deflection, hue deflection, and luminance deflection.

11. (Original) The method of color compensation of claim 10, further comprising:

calculating the input chroma signal, the hue signal and the luminance signal by converting a color signal of the input signal in a color space; and

individually transmitting the calculated chroma, hue, and luminance signals as the input chroma, hue, and luminance signals for use in the calculating the chroma deflection, the hue deflection, and the luminance deflection.

12. (Original) The method of color compensation of claim 10, wherein the first, second and third reference values are provided based on empirical data collected after statistically processing data obtained through experiment.

13. (Original) The method of color compensation of claim 12, wherein the chroma deflection is calculated based on a difference between the input chroma signal and the first reference value.

14. (Previously Presented) The method of color compensation of claim 13, wherein the outputting the compensated chroma, hue, and luminance signals comprises summing the input chroma signal and the chroma deflection.

15. (Original) The method of color compensation of claim 12, wherein the hue deflection is calculated based on a difference between the input hue signal and the second reference value.

16. (Previously Presented) The method of color compensation of claim 15, the outputting the compensated chroma, hue, and luminance signals comprises summing the input hue signal and the hue deflection.

17. (Original) The method of color compensation of claim 12, wherein the luminance deflection is calculated based on a difference between the input luminance signal and the third reference value.

18. (Original) The method of color compensation of claim 17, the outputting the compensated chroma, hue, and luminance signals comprises summing the luminance signal and the luminance deflection.

19. (Original) An apparatus for color compensating an input image having image properties, comprising:

a first deflection calculation unit to detect a first amount of deflection of a first one of the image properties from a first reference value;

a second deflection calculation unit to detect a second amount of deflection of a second one of the image properties from a second reference value; and

a compensation unit which compensates the first and second image properties of the input image using the first and second amounts of deflection so as to output a compensated image.

20. (Original) The apparatus of claim 19, further comprising a third deflection calculation unit to detect a third amount of deflection of a third one of the image properties from a third reference value, wherein the compensation unit compensates the first, second, and third image properties of the input image using the first, second, and third amounts of deflection so as to output the compensated image.

21. (Original) The apparatus of claim 19, wherein one of the first and second image properties is luminance, and the other one of the first and second image properties is chroma.

22. (Original) The apparatus of claim 20, wherein one of the first through third image properties is luminance, another one of the first through third image properties is chroma, and a remaining one of the first through third image properties is hue.

23. (Original) The apparatus of claim 19, further comprising a color space conversion unit to convert the input image into the first and second properties for use by the first and second deflection calculation units.

24. (Original) The apparatus of claim 23, wherein the color space conversion unit converts the input image to be mapped into first and second properties in a color space comprising one of RGB, YIQ, YUV, YCbCr and HLS.

25. (Original) The apparatus of claim 20, further comprising a color space conversion unit to convert the input image into the first through third properties for use by the first through third deflection calculation units.

26. (Original) The apparatus of claim 25, wherein the color space conversion unit converts the input image to the first through third properties mapped in a color space comprising one of RGB, YIQ, YUV, YCbCr and HLS.

27. (Original) The apparatus of claim 19, further comprising a display unit to display the compensated image.

28. (Original) The apparatus of claim 20, further comprising a display unit to display the compensated image.

29. (Previously Presented) The apparatus of claim 19, wherein:

the first deflection calculation unit compares the first image property to first through third ranges to determine the first amount of deflection,

the first range including the first reference value and for which the first amount of deflection is zero,

the second range being disposed outside of the first range and for which the first amount of deflection is non-zero; and

a third range being disposed outside of the first and second ranges and for which the first amount of deflection is zero.

30. (Previously Presented) The apparatus of claim 29, wherein:

the second range includes a midpoint at which the first amount of deflection is at either a maximum or a minimum,

from the midpoint towards the first range, the first amount of deflection either increases or decreases, and

from the midpoint towards the third range, the first amount of deflection increases or decreases in correspondence with whether the first amount of deflection from the midpoint towards the first range increases or decreases.

31. (Previously Presented) The apparatus of claim 20, wherein:

the first deflection calculation unit compares the first image property to first through third ranges to determine the first amount of deflection,

the first range including the first reference value and for which the first amount of deflection is zero,

the second range being disposed outside of the first range and for which the first amount of deflection is non-zero; and

the third range being disposed outside of the first and second ranges and for which the first amount of deflection is zero.

the second deflection calculation unit compares the second image property to fourth through sixth ranges to determine the second amount of deflection,

the fourth range including the second reference value and for which the second amount of deflection is zero,

the fifth range being disposed outside of the fourth range and for which the second amount of deflection is non-zero; and

the sixth range being disposed outside of the fourth and fifth ranges and for which the second amount of deflection is zero, and

the third deflection calculation unit compares the third image property to seventh through ninth ranges to determine the third amount of deflection,

the seventh range including the third reference value and for which the third amount of deflection is zero,

the eighth range being disposed outside of the seventh range and for which the third amount of deflection is non-zero; and

the ninth range being disposed outside of the seventh and eighth ranges and for which the third amount of deflection is zero.

32. (Previously Presented) The apparatus of claim 31, wherein:

the second, fifth, and eighth ranges each include a midpoint at which the corresponding one of first, second, and third amounts of deflection is at a maximum or a minimum,

from the respective midpoints towards the corresponding first, fourth, and seventh ranges, the corresponding first, second, and third amounts of deflection either increase or decrease, and

from the respective midpoints towards the corresponding third, sixth, and ninth ranges, the corresponding first, second, and third amounts of deflection either increases or decreases in correspondence with whether the corresponding first, second, and third amounts of deflection from the respective midpoints towards the corresponding first, fourth, and seventh ranges increases or decreases.

33. (Original) A computer readable medium encoded with processing instructions for performing a method of color compensating an input image having image properties performed by a computer, the method comprising:

calculating a first amount of deflection of a first one of the image properties from a first reference value;

calculating a second amount of deflection of a second one of the image properties from a second reference value; and

compensating the first and second image properties of the input image using the first and second amounts of deflection so as to output a compensated image.

34. (Original) The computer readable medium of claim 33, wherein:

the method further comprises calculating a third amount of deflection of a third one of the image properties from a third reference value, and

the compensating to output the compensated image comprises compensating the first, second, and third image properties of the input image using the first, second, and third amounts of deflection so as to output the compensated image.

35. (Original) The computer readable medium of claim 33, wherein one of the first and second image properties is luminance, and the other one of the first and second image properties is chroma.

36. (Original) The computer readable medium of claim 34, wherein one of the first through third image properties is luminance, another one of the first through third image properties is chroma, and a remaining one of the first through third image properties is hue.

37. (Previously Presented) The computer readable medium of claim 33, wherein the method further comprises converting the input image into the first and second properties for use in the calculating the first and second amounts of deflection.

38. (Previously Presented) The computer readable medium of claim 37, wherein the converting the input image comprises converting the input image to the first and second properties mapped into a color space comprising RGB, YIQ, YUV, YCbCr or HLS.

39. (Original) The computer readable medium of claim 34, wherein the method further comprises converting the input image into the first through third properties for use in the calculating the first through third amounts.

40. (Original) The computer readable medium of claim 39, wherein the converting the input image comprises converting the input image into the first through third properties mapped into a color space comprising RGB, YIQ, YUV, YCbCr or HLS.

41. (Original) The computer readable medium of claim 33, wherein the method further comprises outputting the compensated image to a display unit to display the compensated image.

42. (Original) The computer readable medium of claim 34, wherein the method further comprises outputting the compensated image to a display unit to display the compensated image.

43. (Previously Presented) The computer readable medium of claim 33, wherein the calculating the first amount of deflection comprises comparing the first image property to first through third ranges to determine the first amount,

the first range including the first reference value and for which the first amount is zero,

the second range being disposed outside of the first range and for which the first amount is non-zero; and

a third range being disposed outside of the first and second ranges and for which the first amount is zero.

44. (Previously Presented) The computer readable medium of claim 43, wherein:

the second range includes a midpoint at which the first amount of deflection is at either a maximum or a minimum,

from the midpoint towards the first range, the first amount of deflection either increases or decreases, and

from the midpoint towards the third range, the first amount the other either increases or decreases in correspondence with whether the first amount of deflection from the midpoint towards the first range increases or decreases.

45. (Previously Presented) The computer readable medium of claim 34, wherein:

the calculating the first amount of deflection comprises comparing the first image property to first through third ranges to determine the first amount of deflection,

the first range including the first reference value and for which the first amount of deflection is zero,

the second range being disposed outside of the first range and for which the first amount of deflection is non-zero; and

the third range being disposed outside of the first and second ranges and for which the first amount of deflection is zero,

the calculating the second amount of deflection comprises comparing the second image property to fourth through sixth ranges to determine the second amount of deflection,

the fourth range including the second reference value and for which the second amount of deflection is zero,

the fifth range being disposed outside of the fourth range and for which the second amount of deflection is non-zero; and

the sixth range being disposed outside of the fourth and fifth ranges and for which the second amount of deflection is zero, and

the calculating the third amount of deflection comprises comparing the third image property to seventh through ninth ranges to determine the third amount of deflection,

the seventh range including the third reference value and for which the third amount of deflection is zero,

the eighth range being disposed outside of the seventh range and for which the third amount of deflection is non-zero; and

the ninth range being disposed outside of the seventh and eighth ranges and for which the third amount of deflection is zero.

46. (Previously Presented) The computer readable medium of claim 45, wherein:

the second, fifth, and eighth ranges each include a midpoint at which the corresponding one of first, second, and third amounts of deflection is at either a maximum or a minimum,

from the respective midpoints towards the corresponding first, fourth, and seventh ranges, the corresponding first, second, and third amounts of deflection either increase or decrease, and from the respective midpoints towards the corresponding third, sixth, and ninth ranges, the corresponding first, second, and third amounts of deflection either increase or decrease in correspondence with whether the corresponding first, second, and third amounts of deflection from the respective midpoints towards the corresponding first, fourth, and seventh ranges increases or decreases.